

In the Claims:

Please cancel claims 1-29 without prejudice or disclaimer.

Please add new claims 30-49, as follows:

Claims 1-29 (currently canceled)

Claim 30 (new) A method for forming a ruthenium titanium nitride (RTN) pattern comprising:

- (a) preparing a semiconductor substrate where a RTN thin film is formed; and
- (b) performing CMP process on the RTN thin film using a slurry comprising ceric ammonium nitrate $[(\text{NH}_4)_2\text{Ce}(\text{NO}_3)_6]$, an abrasive and an acid.

Claim 31 (new) The method according to claim 30, wherein the RTN thin film is formed to function as a barrier film.

Claim 32 (new) The method according to claim 30, wherein part (b) is performed under a polishing pressure ranging from about 1 to about 4psi.

Claim 33 (new) The method according to claim 30, wherein part (b) is performed by using a rotary type CMP system, and a table revolution number thereof ranges from about 10 to about 80 rpm.

Claim 34 (new) The method according to claim 30, wherein part (b) is performed in a linear type CMP system where a table movement speed ranges from about 100 to about 600 ft/min.

Claim 35 (new) The method according to claim 30, wherein ceric ammonium nitrate is present in an amount ranging from about 1 to about 10 wt% by total weight of the slurry composition.

Claim 36 (new) The method according to claim 30, wherein the acid is selected from the group consisting of HNO_3 , H_2SO_4 , HCl , H_3PO_4 , and mixtures thereof.

Claim 37 (new) The method according to claim 36, wherein HNO₃ is present in an amount ranging from about 1 to about 10 wt% by total weight of the slurry.

Claim 38 (new) The method according to claim 30, wherein the abrasive is selected from the group consisting of CeO₂, ZrO₂, Al₂O₃ and mixtures thereof.

Claim 39 (new) The method according to claim 30, wherein the average size of the abrasive is below 1 µm.

Claim 40 (new) The method according to claim 30, wherein the abrasive is present in an amount ranging from about 1 to about 5 wt% by total weight of the slurry.

Claim 41 (new) The method according to claim 30, wherein pH of the slurry ranges from about 1 to about 7.

Claim 42 (new) The method according to claim 41, wherein pH of the slurry ranges from about 1 to about 3.

Claim 43 (new) The method according to claim 30, wherein the slurry further comprises a buffer solution.

Claim 44 (new) The method according to claim 43, wherein the buffer solution is a mixture of organic acid and organic acid salt.

Claim 45 (new) The method according to claim 44, wherein the buffer solution is a mixture of acetic acid and acetic acid salt.

Claim 46 (new) A method for forming a RTN pattern comprising:
(a) preparing a semiconductor substrate where a RTN thin film is formed; and
(b) performing CMP process on the RTN thin film using a slurry comprising a ceric ammonium nitrate [(NH₄)₂Ce(NO₃)₆] of 1-10 wt% based on total weight of the slurry;

an abrasive of 1-5 wt% based on total weight of the slurry;
an acidity regulating compound in such amount as to keep up pH of said slurry
as 1 to about 7; and
remaining water.

Claim 47 (new) The method according to claim 46, wherein pH of the slurry
ranges from about 1 to about 3.

Claim 48 (new) The method according to claim 46, wherein said acidity
regulating compound is an acid.

Claim 49 (new) The method according to claim 46, wherein said acidity
regulating compound is a buffer solution consisting of an organic acid and its salt.